

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
Review of the Emergency Alert System ) WC Docket No. 04-296  
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Comment response on : FCC EB Docket No. 04-296  
March 14, 2010  
prepared by Tom Wood – Principal Engineer

In the Matter of Review of the Emergency Alert System  
SECOND FURTHER NOTICE OF PROPOSED RULEMAKING

*In response to III.D.23 and III.E.24 and III.E.30 and IV.33:*

DAS and Monroe Electronics applaud the idea of national EAN testing. The lack of testing for these live alerts has been a major flaw in the EAS system from inception. The nationwide EAS system is in fact a very complicated system of systems that has NEVER been tested system wide. The FNPRM highlights potential vulnerabilities in the EAS system in the absence of national testing of the national alert.

We would like the FCC to state the details about how the national tests differ from the state and local tests. We recommend a statement such as the following: "Operationally, there are two categories of EAS alerts presently defined: the two national alerts, EAN and EAT, designed to immediately broadcast a live presidential message of unknown duration, and all of the other codes, which have a known duration, a maximum audio duration, and often have delayed broadcast or no broadcast." This operational difference between the two major national test codes, EAN and EAT, compared to all other codes, is the first fundamental difference that realistically prompts a different test regime. The EAS equipment is simply operating differently when processing EAN and EAT. The weekly and monthly test alerts are valid and important tests of the EAS system. At the most basic level, they insure that EAS equipment is operational. They can illuminate many basic potential trouble spots, such as transmission and reception problems, and equipment configuration problems. These tests in fact are a perfectly adequate test for the non-national EAS alert codes, such as tornado's and local civil emergencies. But the operational difference between the two fundamental categories of codes, live and not-live, simply requires a separate test in order to fully validate the system.

There are of course broader concerns and issues that emerge at a national system level as well. These are also very important and are not currently tested with the current system. So again, we fully endorse the proposal to conduct annual national testing.

We think that the NPT code, the National Periodic Test, should have been specified to operate exactly like the EAN and EAT. This is the logical code to use for a national test of the live alerts, EAN and EAT, while reserving these codes for genuine alerts. But since the details of NPT operation were never disclosed in the early stages of EAS, it may be too late, speaking practically, to redefine NPT to operate live, just like EAN and EAT. The existing base of legacy systems will not process NPT as a live alert, like EAN and EAT, without firmware changes. We must point out however that trying to use the NPT code in its present form should not be conducted nor considered a valid national field test.

An obvious question here for the FCC is whether changing the installed equipment base is warranted to allow NPT to operate exactly like an EAN. Also, there is not a corresponding termination code for NPT that would simulate an EAT. So even a redefined NPT would likely need to operate slightly differently from EAN (such as requiring a well defined short duration to terminate the alert test period).

We will not make a recommendation on the issue of directly using EAN vs using a redefined NPT. But we do think the FCC should carefully consider the idea of using EAN and EAT for both testing purposes and for real national alerts. On one hand, running the actual EAN and EAT codes is the most direct way to test the actual system. It eliminates the chance that equipment may in fact operate a test live code, such as a redefined NPT, differently than EAN or EAT. Testing the system by running test alerts as EAN and EAT is arguably the most valid test. But will this sow the seeds for public confusion if a genuine national alert is issued? A live NPT would inherently avoid this potential.

But given that testing with EAN and EAT has benefits, and is the likely direction, we recommend that the FCC and FEMA create strict guidelines and protocol to for conducting a national test that uses these codes. We believe that the FCC and FEMA must design a specification for running a national test in order for the test to be both useful for improving the system and useful for the public at large. The intentions of the test should be absolutely clear to the public. Too much is at risk at a later date if the test is not clearly distinguishable from a genuine national alert.

We recommend the FCC and FEMA improve the broadcaster handbooks for response and handling of the national alerts, as well as improve these periodically after each field test.

*In response to III.E.32:*

The Jan 2010 Alaska field test brought up a number of interesting operation details that have not yet been fully vetted. There are significant ambiguities in the Part 11 spec for handling and processing national alerts. These must be addressed in order for vendors to converge on a commonly acceptable solution. Clear understanding of the basic desired results and behavior during EAN/EAT is critical.

We feel that there is considerable social and political risk of backlash in an initial national test that could be mitigated with preliminary simulation testing and at a minimum, with rule clarification. We would consider participating in large scale, multi-vendor lab testing in order to

work out the early issues that will certainly be discovered in the field otherwise. Multi-vendor lab testing would illuminate these basic issues before premature scrutiny from the public from failures in a national field test. The time taken to discover and the chance to mitigate these issues prior to a national field test would almost certainly greatly improve the success of the initial field test.

We also believe that simulation testing is not enough. We recommend that field testing at the national level must certainly be done to improve the system. There are issues unique to the deployed EAS system that can only be found by national testing. For instance, users of EAS equipment likely have incorrect configurations or out of date software for EAN and EAT handling. These test will provide the best opportunity for the EAS community to improve the deployed system.

*In response to III.E.26:*

We agree with this proposal and recommend that yearly national tests be adopted.

*In response to III.E.29:*

We recommend that a great deal of latitude be given, at least initially, to allow vendors and broadcasters to mitigate discovered problems without the threat of fines.

*In response to III.E.30:*

EAS equipment vendors must be included in the participants that can share the knowledge of National Test results. If the results are fully public, then this is not an issue. If the results are in any way restricted, then the equipment vendors risk being excluded. EAS equipment vendors are in essence equal partners with our broadcast customers in regards to diagnosing the results of EAS testing and providing remediation for failures. EAS broadcasters look first to the vendors for expertise.